

WHAT IS CLAIMED IS:

1. A border lighting strip comprising:

an electrical cable including a plurality of electrical conductors;

a plurality of light emitting devices (LEDs) arranged alongside the

5 electrical cable and electrically connected thereto; and

a sheath at least partially made from a light transmissive material, said sheath having a hollow region adapted to receive the LEDs, and an integrally formed cylindrical lens arranged to optically cooperate with the LEDs.

2. The border lighting strip as set forth in claim 1, wherein the sheath

10 includes:

an extruded length of light transmissive material of high refractive index.

3. The border lighting strip as set forth in claim 1, wherein the sheath

includes:

an extruded length of a wave guiding material.

15 4. The border lighting strip as set forth in claim 1, wherein the

plurality of LEDs are arranged such that they face the same direction.

5. The border lighting strip as set forth in claim 4, wherein the

cylindrical lens is arranged parallel to the cable such that the plurality of LEDs

face the cylindrical lens.

20 6. The border lighting strip as set forth in claim 1, wherein each LED

has associated therewith a lead frame which provides for electrical connection

of the LED to the cable.

7. The border lighting strip as set forth in claim 1, further including:
a plurality of LED sockets that receive the LEDs and effectuate connection of the LEDs to the cable.

8. The border lighting strip as set forth in claim 1, further including:
5 a plurality of crimps corresponding to the plurality of LED's which electrically and mechanically connect the LED's to the electrical cable.

9. The border lighting strip as set forth in claim 1, wherein:
the light emitting devices (LEDs) include light emitting diodes.

10. The border lighting strip as set forth in claim 9, wherein the light emitting diodes are selected from a group consisting of:
10 phosphide-based red light emitting diodes,
blue or blue/green nitride-based light emitting diodes, and
phosphor-coated UV light emitting diodes emitting white or other colored light.

15 11. A linear lamp comprising:
an essentially hollow tube of translucent or transparent material;
a plurality of light emitting elements arranged within the tube; and
at least one electrical wire arranged within the tube for supplying electrical power to the light emitting elements.

20 12. The linear lamp as set forth in claim 11, wherein the tube includes:
a wave guide portion that distributes light generated by the light emitting elements along the tube.

13. The linear lamp as set forth in claim 11, wherein the tube includes:
a refracting portion that spreads light generated by the light emitting
elements in a plane perpendicular to the tube.

14. The linear lamp as set forth in claim 11, further including:
5 a plurality of conductors that electrically and mechanically connect the
light emitting elements to the at least one electrical wire.

15. The linear lamp as set forth in claim 11, wherein:
the tube of translucent or transparent material is flexible whereby the
linear lamp is flexible and arrangeable in a non-straight orientation.

10 16. A lighting strip comprising:
a cord including a plurality of parallel conductive wires and an insulating
coating;
a plurality of light emitting elements affixed to the cord and arranged to
receive electrical power therefrom; and
15 an at least partially light transmissive tube surrounding the plurality of
light emitting elements and at least a portion of the cord.

17. The lighting strip as set forth in claim 16, wherein the tube further
includes:

20 an integral optical element that distributes light emitted by the plurality of
light emitting elements along the lighting strip.

18. The lighting strip as set forth in claim 16, wherein the tube further
includes:

a lens integrally formed with the tube that optically communicates with the plurality of light emitting elements.

19. The lighting strip as set forth in claim 16, wherein the light emitting elements include light emitting diodes.

5 20. The lighting strip as set forth in claim 16, further including:
at least one mount that attaches the light emitting elements to the cord.

21. The lighting strip as set forth in claim 16, wherein the tube is formed by an extrusion molding.

10 22. The lighting strip as set forth in claim 16, wherein the tube includes a color tinting.

23. A method for manufacturing a lighting strip, the method comprising:

electrically connecting a plurality of light emitting devices to an electrical cable to form a linear light source;

15 extruding a transparent or translucent sheath adapted to receive the linear light source; and

inserting the linear light source into the extruded sheath.

24. The method as set forth in claim 23, wherein the extruding includes:

20 extruding a cylindrical lens integrally with the extruding of the sheath.

- 15 -

25. The method as set forth in claim 23, wherein electrically connecting includes:

attaching a mount to the electrical cable, which attaching includes an electrical connection between the mount and the cable; and

5 physically and electrically bonding one of the light emitting devices to the mount.

26. The method as set forth in claim 23, wherein electrically connecting includes:

10 crimping electrical leads of one of the light emitting devices to the electrical cable to establish an electrical connection therebetween; and

repeating the crimping for each of the plurality of light emitting devices.